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09/731,733

12/08/2000

Sang Yoon Park

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10/21/2002

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EXAMINER

GEMMELL, ELIZABETH M

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,733

Applicant(s)

PARK ET AL.

Examiner

Beth Gemmell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on application filed 8 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "10" has been used to designate both a plurality of lugs and the panel. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

- Page 7, line 23: "flat portion 12"; should be --flat portion 120--
- Page 10, line 10: "adhesive 14"; should be --adhesive 140--
- Throughout the entire application: "3000kg"; should be --3000 kgf--
- A definition of the term kgf is not provided.

Appropriate correction is required.

Claim Objections

Claim 2 is objected to because of the following informalities:

- Line 2: "3000kgf"; should be --3000 kgf--

Appropriate correction is required.

Claim Rejections - 35 USC § 112

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 1: Applicant claims the use of an implosion proof means as being either strapped or coated. It is unclear as to what the applicant's invention is, since a strapping means and a coating means are not functionally equivalent.

Re claim 2: Applicant claims an implosion proof means having a strapping tension. Since only a strap can have a strapping tension, the limitation of claim 2 fails to further limit the coating means. Therefore, it is unclear as to what is the applicant's invention.

Re claim 9: Applicant claims an implosion proof means is a coat of hardening adhesive. Since the applicant is limiting both the coating and the strap, it is unclear as to what exactly is the applicant's invention.

Although, it is unclear exactly what the applicant is claiming, the following is based on the interpretation of the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4/1, 4/2/1, 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (US Patent 5,965,974).

Saito et al. discloses an implosion proof structure in a flat cathode ray tube having a panel the atmospheric pressure exerts thereto as the flat cathode ray tube is evacuated, comprising: implosion proof means strapped (figure 1,7) on an outer circumferential surface of a funnel (figure 1,6) in the vicinity of the panel (figure 1,1); an implosion proof means having a strapping tension in a range of 600~3000 kgf (column 5, lines 37+); and an implosion proof means is a band with a required yield strength (column 4, lines 29+). Saito et al. further discloses the implosion proof means is a wire with a required yield strength (figure 1,7), wherein the wire has a radius greater than 2.5 mm (column 5, line 33).

Claims 1,9,10,11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Uesaka et al. (US Patent 4,943,862).

Re claim 1: Uesaka et al. discloses an implosion proof structure in a flat cathode ray tube having a panel the atmospheric pressure exerts thereto as the flat cathode ray tube is evacuated, comprising: implosion proof means coated (figure 1,3,4 and 5) on an

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outer circumferential surface of a funnel (figure 1,1) in the vicinity of the panel (figure 1,2).

Re claim 9/1: Uesaka et al. discloses the implosion proof means as a coat of hardening adhesive with a required yield strength after hardened (column 4, lines 23+).

Re claim 10: Uesaka et al. discloses a hardening adhesive having a thickness (column 4, lines 33+).

Re claim 11: Uesaka et al. discloses a hardening adhesive having a width (column 4, lines 51+).

Re claim 13: Uesaka et al. discloses the hardening adhesive formed of a ceramic (column 4, lines 23+)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3,5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al.

Re claim 3: Saito et al. fails to disclose a flat portion perpendicular to the panel on the outer circumferential surface.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flat portion perpendicular to the panel because it allows for a place for the strap/coating to adhere to allowing for a more uniform tension due to the flat surface, therefore improving the ability to impede implosion.

Re claim 5: Saito et al. fails to disclose the surface perpendicular to the panel as having a width larger than the width of a band.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a surface larger than the band because without it the band would not be able to be stabilized therefore it allows for a better hold and tension reducing the risk of implosion.

Re claim 6: Saito et al. fails to disclose the flat portion equal to or greater than 16 mm.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flat portion equal to or greater than 16 mm, since the applicant has not disclosed that a flat portion equal to or greater than 16mm solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with a flat portion less than 16mm as long as it is wider than the band.

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uesaka et al.

Uesaka et al. fails to disclose the hardening adhesive formed of a material having a difference of thermal expansion/contraction coefficients between the hardening adhesive after hardened and the funnel to be below approximately $5 \times 10^{-7} / ^\circ\text{C}$.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a hardening adhesive formed of a material having a difference of thermal expansion/contraction coefficients between the hardening adhesive after hardened and the funnel to be below approximately $5 \times 10^{-7} / ^\circ\text{C}$ because it is an inherent property of the of the hardening adhesive chemical.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


- US Patent 4,168,010 discloses an implosion proof structure using a bondment having high yield strength.
- US Patent 4,207,493 discloses an implosion proof structure using a metal rimband.
- US Patent 4,884,006 discloses an implosion proof structure using a coating.
- US Patent 6,111,352 discloses an implosion proof structure using an explosion proof film.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

emg
October 8, 2002


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
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